

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF MISSOURI  
EASTERN DIVISION

BANCORP SERVICES, L.L.C.,	)	
	)	
Plaintiff	)	
	)	
v.	)	Civil Action No. 00-cv-01073 (CEJ)
	)	
SUN LIFE ASSURANCE COMPANY OF	)	
CANADA (U.S.),	)	
	)	
Defendant.	)	
	)	

**SUN LIFE’S REPLY BRIEF IN SUPPORT OF ITS  
MOTION FOR SUMMARY JUDGMENT OF  
INVALIDITY UNDER 35 U.S.C. § 101**

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## INTRODUCTION

All of the asserted claims describe a process of administering an insurance policy, where the process consists of nothing more than a series of mathematical calculations, with certain additional steps such as generating the policy, storing data, and gathering data. The claims recite nothing more than unpatentable abstract ideas when analyzed under the Supreme Court's *Bilski*, *Benson*, *Flook*, and *Diehr* line of cases. The claims also fail the machine-or-transformation test.

Bancorp's opposition relies on numerous mischaracterizations of the Supreme Court cases in a failed attempt to characterize the claims as patent-eligible. Bancorp's central argument is that while one mathematical calculation is an unpatentable abstract idea, a series of such mathematical calculations makes the idea patentable. There is absolutely no support for this notion. Adding more algorithmic elements to a claim for an abstract idea does not convert the abstract idea to a patentable process, as confirmed by the Supreme Court cases in which claims with multiple elements were still found not patent-eligible. To be patentable under *Bilski*, a claim must have a physical aspect that is not insignificant in the context of the claim, like the claims in *Diehr*. Because none of Bancorp's claims contain any such aspect, and they are unpatentable, just like the claims in *Benson*, *Flook*, and *Bilski*.

Some claims contain insignificant references to a computer, or refer to the steps of the method as a "system." Such recitations are, however, inconsequential extra-solution activity or "field-of-use" restrictions, which cannot impart patentability. In fact, Bancorp makes no argument that the nominal recitations of a computer are significant. Instead, Bancorp offers only a theoretical argument that there may be some claims in some patent not at issue in this case in which the addition of a computer is more than insignificant extra-solution activity. This may or may not be true, but, at a minimum, such a theoretical claim would need to be constructed such that the computer was more than just a convenient vehicle for performing the algorithmic steps.

That is not the case here; in fact, the tasks performed by the computer in the Bancorp patents are so routine that the specification does not even describe how they are implemented. These claims are no different than those in *Benson*, which the Supreme Court found not patent-eligible even though they recited computer hardware in the form of a “shift register.”

Because the claims are directed solely to abstract ideas, and because they cannot pass the machine-or-transformation test, summary judgment of invalidity under § 101 is appropriate.

## ARGUMENT

### I. Bancorp Misinterprets *Bilski* and the “Guidepost” Cases

For the reasons stated in Sun Life’s opening brief, the claims of the patents-in-suit are unpatentable under the Supreme Court’s *Bilski*, *Flook*, *Benson* and *Diehr* precedent. The claims, which involve only gathering data, performing calculations, and updating various values, are indistinguishable from the unpatentable claims in *Flook*, *Benson*, and *Bilski*, which contained similar steps, and entirely unlike the claims *Diehr*, which recited significant physical steps *in addition to the algorithmic elements*. Bancorp desperately tries to avoid a finding of invalidity by completely misinterpreting these cases, even going so far as to create legal holdings where there were none.

For example, Bancorp argues incorrectly that *Bilski* constituted an outright “rejection” of the machine-or-transformation test. (Dkt. No. 382, at 11-12.) The Supreme Court most certainly did not “reject” that test. Instead, the Supreme Court only held that the machine-or-transformation test was not the “sole test.” *Bilski v. Kappos*, 130 S. Ct. 3218, 3227 (2010). The Court unanimously found that the test was still a “useful and important clue” in assessing patentability. *Id.* at 3226-27, 3232 & 3259. It therefore would be improper to entirely ignore the test, as Bancorp proposes.

Bancorp also claims that the Supreme Court “found” that the machine-or-transformation ignores the technological evolution to the “Information Age.” (Dkt. No. 382, at 12.) What Bancorp fails to acknowledge, however, is that the portion of the *Bilski* opinion upon which it relies for that assertion, Section II-B-2, was joined by only four justices. The other language Bancorp plucks from *Bilski*, that about “technology for conducting business more efficiently,” appears in the context of a discussion about whether a business method can be classified as a “process” under Section 100(b); it says nothing about whether such methods are or are not eligible for patenting under Section 101.

The *Bilski* Court explicitly stated that even though the machine-or-transformation test was not the sole test, it was not suggesting that there are a large number of inventions that can fail the test and still be patent-eligible. *Bilski*, 130 S. Ct. at 3229 (noting that “while § 273 appears to leave open the possibility of some business method patents, it does not suggest broad patentability of such claimed inventions”); *id.* at 3228 (plurality portion of opinion) (“It is important to emphasize that the Court today is not commenting on the patentability of any particular invention, let alone holding that any of the above-mentioned technologies from the Information Age should or should not receive patent protection.”); *id.* at 3229 (plurality portion of opinion) (“The Information Age empowers people with new capacities to perform statistical analyses and mathematical calculations with a speed and sophistication that enable the design of protocols for more efficient performance of a vast number of business tasks. If a high enough bar is not set when considering patent applications of this sort, patent examiners and courts could be flooded with claims that would put a chill on creative endeavor and dynamic change.”)<sup>1</sup>

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<sup>1</sup> See also *id.* at 3235 (Stevens, J. concurring) (“Few, if any, processes cannot effectively be evaluated using [the machine-or-transformation test.]”); *id.* at 3259 (Breyer, J., concurring) (“[I]n reemphasizing that the ‘machine-or-transformation’ test is not necessarily the *sole* test of patentability, the Court intends

Bancorp also asserts that the Supreme Court held in *Benson* that “computer programs are patentable.” (Dkt. No. 382, at 13.) This is another gross misreading of the case law. In finding the claims at issue in that case *unpatentable*, the *Benson* court stated that it was not making a broad holding that *all* software was *unpatentable*. *Gottschalk v. Benson*, 409 U.S. 63, 71 (1972) (“It is said that the decision precludes a patent for any program servicing a computer. We do not so hold.”) This is very different than holding that computer programs are patentable. *Id.* And the *Benson* Court recognized that the President’s Commission on the Patent System had rejected a proposal that computer programs be patentable, stating that “[u]ncertainty now exists as to whether the statute permits a valid patent to be granted on [computer] programs.” *Id.* at 72 (quoting “To Promote the Progress of . . . Useful Arts,” Report of the President’s Commission on the Patent System (1966), at 13). The Court noted the Commission’s concern that prior art searches for computer programs are not available or reliable and that innovative computer programs have been created without the availability of patents. *Id.* Consequently, the Court explained that “[i]f [computer] programs are to be patentable, considerable problems are raised which only committees of Congress can manage, for broad powers of investigation are needed, including hearings which canvass the wide variety of views which those operating in this field entertain” and that they should only be held patentable if Congress explicitly grants such protection, which Congress has not done. *Id.* at 72-73. *Benson* thus stands for the opposite of what Bancorp says it does. Computer programs are generally *not* patentable.

Bancorp then goes on to misdescribe *Diehr*. According to Bancorp, the claims in *Diehr* concerned a computerized process. (Dkt. No. 382, at 13-14). That is completely untrue. As the

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neither to deemphasize the test’s usefulness nor to suggest that many patentable processes lie beyond its reach.”).



Court made perfectly clear, the invention claimed in *Diehr* covered “***a process for molding raw, uncured synthetic rubber into cured precision products***,” including numerous physical steps. *Diamond v. Diehr*, 450 U.S. 175, 177 (1981); *id.* at 187 (explaining that the claim required “installing rubber in a press, closing the mold, constantly determining the temperature of the mold, constantly recalculating the appropriate cure time through the use of the formula and a digital computer, and automatically opening the press at the proper time.”). The invention was for an improved physical and chemical process for molding rubber articles. *Id.* at 181 & 184. In fact, the Supreme Court made clear that the “claims involve the transformation of an article, in this case raw, uncured synthetic rubber, into a different state or thing.”<sup>2</sup> *Id.* at 184. As the Court recognized in *Bilski*, only “some of [the] steps [in *Diehr*] [were completed] by way of a computer.” *Bilski*, 130 S. Ct. at 3230 (citing *Diehr*, 450 U.S. at 177).

Because the patentable claims in *Diehr* were for “an industrial process for the molding of rubber products,” not merely a computer program, *Diehr*, 450 U.S. at 192-93, they bear no resemblance to Bancorp’s claims. According to Bancorp’s own description of its claims, “calculations are made, policies are generated, and data is stored and received.” (Dkt. No. 382, at 13.) That is not an industrial process. There are no physical steps. There is nothing like a press. Nothing is physically opened or closed. Nothing like rubber is changed in any manner. Everything is abstract, and the combination of calculations does not make the process any less

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<sup>2</sup> Bancorp strangely argues that despite this specific language in *Diehr*, it is improper to rely on this reasoning of the Supreme Court because it is part of the machine-or-transformation test, “rather than governing Supreme Court precedent.” (Dkt. No. 382, at 15.) This of course makes no sense at all, because *Diehr* is part of the “governing Supreme Court precedent.” This only shows that Bancorp’s argument that the machine-or-transformation test was “explicitly rejected” in *Bilski*, which approvingly described *Diehr* along with *Flook* and *Benson*, is complete nonsense.

abstract. The process in the Bancorp claims merely creates one abstract concept, an insurance policy, and then calculates and manipulates data related to that policy.

Bancorp's next misinterpretations concern its attempts to distinguish *Benson* and *Flook* from the claims of the patents-in-suit.

Bancorp's **only** argument to distinguish its claims from the unpatentable claims in *Benson* is that *Benson* included only "**one** mathematical formula," while Bancorp's claims, it says, contain **multiple** mathematical calculations. Bancorp apparently concedes that each element of the asserted claims is an abstract idea or mathematical calculation, but argues that what is patentable is the "calculation and deduction of fees in the manner and in combination with all of the other elements taught by the asserted claims." (Dkt. No. 382, at 16.) This approach is plainly incorrect; an unpatentable algorithm does not become patent-eligible merely because it is joined with another unpatentable algorithm.

That Bancorp's approach is erroneous is easily confirmed by reference to *Bilski*, *Benson*, and *Flook*, none of which parsed the claims as Bancorp asks the Court do here. In *Bilski*, for example, the entire claimed method of hedging, as a whole, was an unpatentable abstract idea. *See Bilski*, 130 S. Ct. at 3223-24 (finding the combination of the steps—plus the further combinations found in the dependent claims unpatentable); *Benson*, 409 U.S. at 68 & 73-74 (considering the claims as a whole); *Parker v. Flook*, 437 U.S. 584, 585-86 & 594-95 (1978) (same). Under Bancorp's analysis, each of these Supreme Court cases was analyzed and decided incorrectly.

Finally, Bancorp argues that *Flook* did not hold that a process of "gathering data, performing calculations, and updating various values" is unpatentable. (Dkt. No. 382, at 17.)

This too is entirely untrue. That is exactly what the patent in *Flook* did, and exactly why it was

an unpatentable abstract idea. The claim gathered data (step #1), performed calculations (steps #2 & #3) and updated a value, namely an “alarm limit which is defined as  $B1 + K$ ” (step #4). *See Flook*, 437 U.S. at 596-97, Appendix. That is also exactly what Bancorp’s claims do. Both are unpatentable.

When the case law is read without Bancorp’s misinterpretations, it is clear that Bancorp’s claims do not recite patent-eligible subject matter.

## **II. Under *Bilski*, *Flook*, *Diehr*, and *Benson*, Bancorp’s Claims Are Unpatentable**

As explained in Sun Life’s motion, applying the correct readings of *Bilski*, *Benson*, *Flook*, and *Diehr*, it is apparent that the claims of the patents-in-suit are unpatentable. The Abstracts explain that the patent concerns a “[m]ethod and system to track, reconcile and administer values.” (’792 and ’037 patents, Abstract.) Tracking, reconciling, and administering values are abstract ideas.

None of the steps of any asserted claim is anything more than an abstract idea of mathematical calculation. Generating a life insurance policy is an abstract idea.<sup>3</sup> Calculating or “determining” fees,<sup>4</sup> fee units,<sup>5</sup> credits,<sup>6</sup> investment value (including by employing amortization to make the calculation),<sup>7</sup> the value of underlying securities,<sup>8</sup> a policy value,<sup>9</sup> a policy unit

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<sup>3</sup> ’792 patent, 9[a], 18[a]; ’037 patent, 1[a], 9[a], 18[a], 42[a], 52[a], 63[a].

<sup>4</sup> ’037 patent, 1[b], 9[b], 18[b], 20, 42[b], 52[b], 63[b].

<sup>5</sup> ’792 patent, 9[b], 18[b].

<sup>6</sup> ’792 patent 9[c], 18[c], 28[a]; ’037 patent, 1[c], 9[c], 18[c], 19[a], 28[a], 42[c], 52[c], 63[c].

<sup>7</sup> ’792 patent, 9[d], 18[d], 28[b]; ’037 patent, 1[d], 9[d], 18[d], 19[b], 28[b], 42[d], 52[d], 63[d], 87, 88, 91, 92.

<sup>8</sup> ’792 patent, 9[d], 18[d], 28[b]; ’037 patent, 1[d], 9[d], 18[d], 19[b], 28[b], 42[d], 52[d], 63[d].

<sup>9</sup> ’792 patent, 9[e], 18[e], 28[c]; ’037 patent, 1[e], 9[e], 18[e], 19[c], 28[c], 42[e], 52[e], 63[e].

value,<sup>10</sup> a targeted return (including by amortizing),<sup>11</sup> or any other value is also just a mathematical calculation, which is an abstract idea. Receiving such values that were calculated elsewhere does not make the idea less abstract.<sup>12</sup> Removing or accumulating fees are also just mathematical calculations.<sup>13</sup> Storing such values is also an abstract concept (or, at best, inconsequential post-solution activity).<sup>14</sup> Other than some nominal references to a computer,<sup>15</sup> those constitute all the steps of the asserted claims, and they are nothing more than a series of abstract ideas, just like the series of steps in *Bilski*'s hedging method. Consequently, each of the claims of the patents, as a whole, attempt to patent an abstract idea.

While Bancorp complains that Sun Life does not treat each claim separately in its brief, there is no need under these circumstances to discuss each claim individually. Because there are numerous virtually identical claims that seek to protect what is essentially the same idea, that would only create a very long, repetitive brief. Sun Life carefully organized the claims into three categories, the “method” claims, the “system” claims, and the “computer” claims. (Dkt. No. 364, at 18 nn. 3-4, 21 nn. 9-11.) Sun Life's motion then analyzed each category, covering every

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<sup>10</sup> '792 patent, 9[e], 18[e], 28[c]; '037 patent, 1[e], 9[e], 18[e], 19[c], 28[c], 42[e], 52[e], 63[e].

<sup>11</sup> '037 patent, 8, 27 & 49, 66, 68, 72, 74, 75, 77, 81, 83, 93, 95.

<sup>12</sup> '037 patent, 67, 73, 76, 82, 94.

<sup>13</sup> '792 patent, 9[g], 18[g]; '037 patent, 1[g], 9[g], 18[g], 21, 42[g], 52[g], 63[g].

<sup>14</sup> '792 patent, 9[f], 18[f], 28[d]; '037 patent, 1[f], 9[f], 18[f], 19[d], 28[d], 42[f], 52[f], 63[f].

<sup>15</sup> See '792 patent, claims 17 and 37, and '037, claims 17, 37 and 60 (steps “performed by a computer”); see also '792 patent, preamble of claim 18, and '037 patent, preamble of claims 18, 63, 72, 73, 74, 93, 94, and 95 (“computer readable media for controlling a computer”); '037 patent, preamble of claims 19, 20, 21, 27, 75, 76, 77, 91, and 92 (“computer system”).

step of the asserted claims in the analysis.<sup>16</sup> (*See, e.g., id.*, at 15.) Critically, Bancorp makes no effort to identify any difference in the outcome based on one asserted claim compared to another. All the categories of claims should stand or fall together.

Bancorp repeatedly argues that the finding of invalidity must be based on clear and convincing evidence and that Sun Life has supposedly not met this standard. Here Bancorp misses the boat entirely. Statutory subject matter under Section 101 is a *legal* question. *See SiRF Tech., Inc. v. International Trade Comm’n*, 601 F.3d 1319, 1331 (Fed. Cir. 2010). There is no fact issue presented (and certainly none identified by Bancorp) that requires clear and convincing, or any other level, of proof.

Bancorp’s more fundamental argument is that if a claim combines multiple calculations or abstract ideas together, the claim no longer is an abstract idea. As discussed above, Bancorp is manifestly wrong. Adding more steps to an algorithm does not make it less of an abstract idea. That is why the inventions in *Flook*, *Benson*, and *Bilski* were unpatentable, notwithstanding that

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<sup>16</sup> Bancorp specifically mentions claim 21 of the ‘037 patent, which includes a “debitor for removing a value of fees.” However, Sun Life discussed how removal of fees is an abstract idea (*see* p. 8 & n.13, *supra*; Dkt. No. 364, at 1, 12, 15 and 27), like all the other calculations extensively discussed. Bancorp also specifically mentions claims 87 and 91 of the ‘037 patent, which includes an “adjuster” for adjusting the investment value to amortize for at least on initial fee. However, this is just another manner of performing a mathematical calculation to calculate (“adjusting” is still calculating) an investment value, and Sun Life extensively discussed mathematical calculations, including calculation of investment value (*see* p. 7 & n.7, *supra*; Dkt. No. 364, at 1, 12, 15, 16, 17, 18, 22 & n.12, 24, 25, 26, 27). Bancorp also specifically mentions claims 8, 27 and 49 of the ‘037 patent, which include a “calculator” for calculating targeted return. Again, however, this is just another mathematical calculation, which Sun Life discussed extensively, including calculation of targeted return (*see* p. 8 & n.11, *supra*; Dkt. No. 364, at 1, 12, 15, 16, 17, 22 & n.12, 24, 25, 26, 27). Bancorp also specifically mentions claims 76, 82 and 96 of the ‘037 patent, which includes a “receiver” for receiving data. However, Sun Life discussed how receiving data does not make an abstract idea patentable (*see* p. 8 & n.12, *supra*; Dkt. No. 364, at 15 (discussing “receiving”), 16, 22 & 24 (discussing data gathering)). Furthermore, Bancorp’s argument about construing these claims and numerous others as encompassing “one of more computers” was also addressed extensively. The claims are unpatentable assuming (correctly) that Bancorp’s proposed construction is wrong (Dkt. No. 364, at 18-20) and also unpatentable using Bancorp’s proposed construction (*id.* at 21-27).

they all included multiple steps or calculations, while the *Diehr* invention, which transformed rubber, was patentable. In *Diehr*, the non-algorithmic elements, reciting the physical steps of molding raw, uncured synthetic rubber into cured precision products, were not insignificant in the context of the claim. There are no such elements in Bancorp's claims. Tellingly, Bancorp is unable to cite to a single case in which a patent claim was held to be patent-eligible merely because it combined multiple calculations or abstract ideas together.

Instead of relying on such cases (because there are none), Bancorp argues that if the patents-in-suit are invalid, then any process defined by a particular set of steps using mathematical calculations is unpatentable. (Dkt. No. 382, at 26.) Whether or not such a broad proposition would be true (and it may be) is not material to the outcome of this motion. The facts of *this case* are that there are no meaningful non-algorithmic elements in the claims, and, as such, the claims seek to patent abstract ideas.

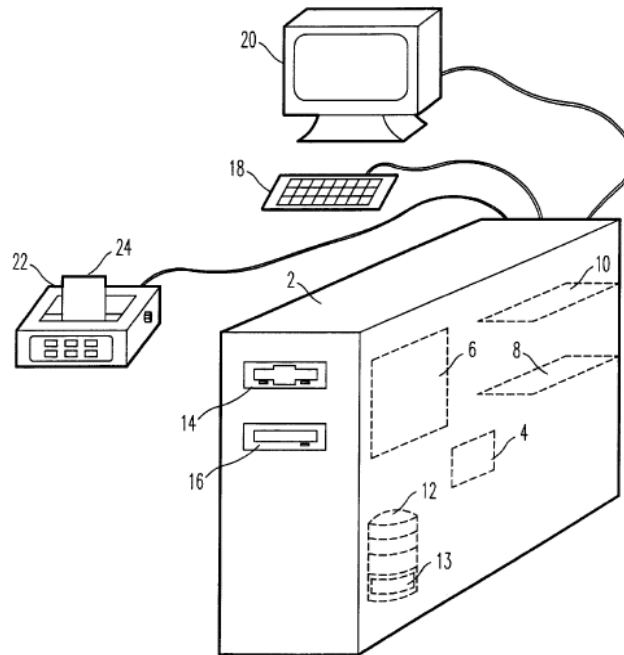
While Bancorp attempts to cite *Flook* for support on this issue, *Flook* only shows that the claims of the patents-in-suit are not patentable. It is true that "a process is not unpatentable simply because it contains a . . . mathematical algorithm." *Flook*, 437 U.S. at 590. Sun Life does not argue otherwise. However, "the process itself, not merely the mathematical algorithm, must be new and useful." *Id.* at 591. As the *Flook* Court explained:

Respondent's process is unpatentable under § 101 not because it contains a mathematical algorithm as one component, but because, once that algorithm is assumed to be within the prior art, the application, considered as a whole, contains no patentable invention. Even though a phenomenon of nature or mathematical formula may be well known, an inventive application of the principle may be patented. Conversely, the discovery of such a phenomenon cannot support a patent unless there is some other inventive concept in its application.

*Id.* at 594.

In other words, this portion of *Flook* stands for the proposition that the addition of an algorithm will not defeat patentability of an otherwise patentable claim; it does not indicate that an algorithm alone can be patentable.

Here, once the mathematical algorithms are assumed to be within the prior art, as instructed in *Flook*, the claims contain no patentable invention because there is no other inventive concept. All that is left (at most) is a conventional general purpose computer, such as the one shown in Fig. 1.<sup>17</sup>



**FIG. 1**

<sup>17</sup> Bancorp also argues that a finding that the claims are invalid under Section 101 requires an overbroad definition of “algorithm,” citing *Diehr*. (Dkt. No. 382, at 27.) But *Diehr* did not decide the definition of “algorithm.” See *Diehr*, 450 U.S. at 186 n.9 (“[W]e do not pass judgment on whether processes falling outside the definition previously used by this Court, but within the definition offered by the petitioner, would be patentable subject matter”). Moreover, the definition stated in *Diehr*—a “procedure for solving a given type of mathematical problem”—is sufficient in this instance. *Diehr*, 450 U.S. at 186. The elements in the claims of the patents-in-suit describe a procedure for solving a number of mathematical problems.

Bancorp also errs by attempting to interpret *Bilski* as upholding the validity of a claim if it contains multiple calculations, rather than only one mathematical equation. (Dkt. No. 382, at 27.) This is undeniably wrong. Bancorp would like to believe that claim 4 in *Bilski* would become patent-eligible if it added a second equation because it is so similar to Bancorp's claims—both express an abstract idea using mathematical calculations. It is clear, however, that the addition of more calculations would not render *Bilski*'s claim 4 patent eligible; claims 7 and 8 in *Bilski*, which depended from claim 4, did add calculations but were still held to be unpatentable. *See Bilski*, 130 S. Ct. at 3224 (“Some of these claims also suggest familiar statistical approaches to determine the inputs to use in claim 4's equation”). Thus, contrary to Bancorp's claims, *Bilski* does not suggest that including multiple equations in a claim makes it patentable; in fact, it holds the opposite for the dependent claims.

In short, the claims of the patents-in-suit, describing a method for calculating and tracking certain values, are a series of mathematical equations that attempt to patent the abstract idea of administering a particular type of insurance policy. They are like the claims in *Benson*, *Flook*, and *Bilski* and, thus, they are unpatentable.

### **III. The Nominal Recitations to a Computer in Some of the Claims of the Patents-in-Suit Are Insignificant Extra-Solution Activity**

The recitations to a computer in Bancorp's claims also constitute insignificant extra-solution activity. The computer simply does the routine tasks of performing calculations, storing data, and perhaps inputting and outputting data. Any computer can perform these tasks, and the patents do not even explain how the computer performs the tasks. The nominal references to a “computer” in some of the claims do not make the claims patent eligible because their inclusion does not impose any meaningful limit on any claim's scope.



This proposition is unassailable in view of *Benson*, because virtually every step in claim 8 in that case required a computer. The claim was held not patent-eligible even though it explicitly required computer hardware, namely a “shift register.” *See Benson*, 409 U.S. at 71-72.<sup>18</sup>

Bancorp argues that *Bilski* changed the law such that the cases concerning “extra-solution activity” prior to *Bilski* are not good law. This is plainly incorrect because this rule, which was established in the *Benson/Floor/Diehr* trilogy of cases, was reaffirmed in *Bilski*. *See Bilski*, 130 S. Ct. at 3230 (“*Flook* stands for the proposition that the prohibition against patenting abstract ideas cannot be circumvented by . . . adding insignificant post-solution activity.”) (quoting *Diehr*, 450 U.S. at 191-92). The cases following *Flook* on this point but decided prior to *Bilski* are, at the very minimum, highly informative.

Moreover, despite the limited amount of time since the *Bilski* decision, there have already been cases decided post-*Bilski* that employ this doctrine to reject claims, including *Ultramercial*, *Ex parte Proudler*, and *Ex parte Birger*.<sup>19</sup> (*Id.*, at 22-23.) Bancorp’s efforts to distinguish those cases are unavailing. For example, the BPAI in *Ex Parte Proudler* and *Ex parte Birger* did not find the claims unpatentable because they were directed to “signals.” Rather, the BPAI found

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<sup>18</sup> Claim 8 in *Benson*, reproduced in its Appendix, reads as follows (emphasis added):

The method of converting signals from binary coded decimal form into binary which comprises the steps of (1) storing the binary coded decimal signals in a reentrant **shift register**, (2) shifting the signals to the right by at least three places, until there is a binary '1' in the second position of **said register**, (3) masking out said binary '1' in said second position of **said register**, (4) adding a binary '1' to the first position of **said register**, (5) shifting the signals to the left by two positions, (7) shifting the signals to the right by at least three positions in preparation for a succeeding binary '1' in the second position of **said register**.

<sup>19</sup> Another case, *Ex parte Burkhart*, No. 2009-8220, 2010 WL 3738331, \*4 (BPAI Sept. 22, 2010), decided after Sun Life’s motion was filed, held that despite reciting that the method was “computer-implemented,” the claim was not patentable because “a nominal recitation of a general purpose computer is not an express recitation to a *particular* machine” and at best a field-of-use limitation.

that, like Bancorp's claims, the claims could be performed using software, which the BPAI reasoned was unpatentable. *See Ex Parte Proudler*, No. 2009-6599, 2010 WL 2727840, \*2-3 (BPAI July 8, 2010); *Ex parte Birger*, No. 2009-6556, 2010 WL 2800803, \*2-3 (BPAI July 13, 2010) (same)). Furthermore, Bancorp provides absolutely no basis to distinguish *Ultramercial*'s holding that the added computer features in that patent did not make the abstract idea patentable (*Ultramercial, LLC v. Hulu, LLC*, 2010 WL 3360098, \*4-6 (C.D. Cal. Aug. 13, 2010)), arguing only that Bancorp's process is patentable even before the computers are added, which is beside the point.

Yet another very recent example is found in *Graff/Ross Holdings LLP v. Federal Home Loan Mortgage Corp.*, slip op., No. 07-cv-00796-RJL (D.D.C. Aug. 27, 2010), decided shortly after Sun Life filed its opening memorandum. (A copy of the slip opinion is attached as Exhibit A.) In *Graff/Ross*, the magistrate found the claims unpatentable despite the fact that they recited "a digital electrical computer system, a digital electrical computer processor, and an output means." *Id.* at 12. Relying in part on the USPTO's Interim Guidelines, the opinion explained that these claim elements were "no more than 'object[s] on which the method operates,'" that they "provide[d] no meaningful limitation," and that "the claim is 'so abstract and sweeping that it could be performed through any existing or future-devised machinery, or even without an apparatus.'" *Id.* at 12-13. These conclusions apply equally to Bancorp's claims.

Bancorp does not disagree that the patents fail to provide any explanation of how to perform the various tasks using a computer, and Bancorp does not disagree that all the tasks are standard tasks any computer can perform. Instead, Bancorp's only argument on this point is that its claims are patentable even if they were not tied to computers, such that tying the claims to computers does not render the claims unpatentable. (Dkt. No. 382, at 30.) This argument

amounts to an admission that the claims that do not recite a computer are not patentable, because they recite abstract business methods that may be performed mentally or by a person with a pencil and paper. And because the claims that are not tied to a computer are not patent-eligible (*see* Section II, *supra*; Dkt. No. 364, at 12-18), Bancorp is left with *no* argument that the computer limitations are sufficient to confer patent-eligibility.

#### **IV. There Is No Need to Resolve Any Claim Construction Issues Before Determining Whether the Patents Are Unpatentable**

Predictably, Bancorp seeks to avoid summary judgment by arguing that the claims must be construed first. That argument has no merit; claim construction does not need to occur first when, as in this case, it is not necessary to resolve the issue. *See, e.g., Graff/Ross Holdings*, slip op. at 4 (declining to construe the claims prior to resolving the § 101 issue and explaining that “the court may forgo claim construction for summary judgment purposes if construing the claims is unnecessary to resolve the controversy”).

First, deciding whether terms such as “determining an investment value,” “calculating a policy value and a policy unit value for the current day,” and “calculating a targeted return” are algorithmic does not require construction of any of those terms. It is irrelevant that Sun Life’s proposed constructions construe the terms with reference to the specific mathematical algorithms provided in the only embodiment described in the specification. What matters is that each of these terms describes a mathematical algorithm, whether the exact formula is specified or not. That is the case under either party’s proposed construction.

Second, the terms in the “system” claims, including “policy generator,” “fee calculator,” “credit calculator,” investment calculator,” “policy calculator,” “policy value calculator,” “receiver,” “accumulator,” “adjustor,” and “debtor,” do not need to be construed either. For purposes of patent eligibility under Section 101, the only part of the parties’ constructions of

these terms that is even arguably relevant is whether the terms require that each task be performed using “one or more computers,” as Bancorp proposes. But even if they are construed to require use of a computer, as Bancorp proposes, that would only put them into the same category as the claims that expressly recite a computer. And Bancorp has no real argument that the inclusion computer renders its claims patentable because the “shift register” was insufficient to make the claims in *Benson* patentable.<sup>20</sup> These claims are invalid regardless of whether or not they require the use of a general purpose computer.

For these reasons, there is no need to conduct a full claim construction analysis in connection with the motion, and Bancorp’s argument on this point is simply an attempt to delay the inevitable conclusion that the claims are not patent-eligible. It would be much more efficient to address this motion prior to claim construction.

#### **V. The Rule Against Patenting Abstract Ideas and the Machine-or-Transformation Test Apply to Bancorp’s “System” Claims**

As a practical matter, Bancorp limits its argument to the “life insurance policy management system” and “computer system” claims in the patents-in-suit.<sup>21</sup> (*See* Dkt. No. 382, § III, at 17-21.) Bancorp’s core argument is that its “system” claims are directed to a “machine” because they use a computer. However, courts have repeatedly found that inconsequential

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<sup>20</sup> Bancorp also asserts that the differing proposed constructions of “a computer system,” “computer,” “storing” and “digital storage” affect the Section 101 analysis. They do not, and Bancorp fails to explain how they do.

<sup>21</sup> According to Bancorp, the “system” claims are independent claims 1, 19 and 42 of the ’037 patent and dependent claims 8, 20, 21, 27, 49, 67, 68, 75, 76, 77, 81, 82, 83, 87, 88, 91, and 92 of the ’037 patent. (Dkt. No. 382, at 17-18.) Sun Life characterizes the claims a bit differently. The “system” claims are actually independent claims 1 and 42 of the ’037 patent and dependent claims 8, 49, 66, 67, 68, 81, 82, 83, 87, and 88 of the ’037 patent. (Dkt. No. 364, at 18, n. 4.) Those claims do not recite a computer. There is also a separate set of “*computer* system” claims that Sun Life groups with the other “computer” claims that nominally recite a computer. The “computer system” claims are independent claim 19 of the ’037 patent and dependent claims 20, 21, 27, 75, 76, 77, 91, and 92 of the ’037 patent.

recitation to a computer does not turn an abstract idea into a patentable invention, either because such nominal recitations are attempts to preempt the algorithm and obtain a patent on the abstract idea itself, or because such recitations constitute insignificant extra-solution activity. (*See* Section III, *supra*; Dkt. No. 364, at 22-26, citing numerous cases.)

Bancorp does not disagree that its “system” claims are virtually identical to the method claims, except for the substitution of coined terms ending in “or” or “er” for certain of the method steps, an example being the use of “investment calculator” instead of “determining an investment value and a value of the underlying securities.” Bancorp merely argues that because it construes those terms as requiring “one or more computers,” the claims are patentable.

As an initial matter, Bancorp’s construction of these terms is wrong. Each term encompasses any and all ways of performing the function that follows the term and does not require a computer. (*See* Dkt. No. 364, at 20; Dkt. No. 338, at 56-69.) That is of little consequence, however, because, even under Bancorp’s proposed construction, the proposed “one or more computers” is either an inconsequential field-of-use restriction or insignificant post-solution activity, as explained in detail in Sun Life’s opening brief. (*See* Section III, *supra*; Dkt. No. 364, at 21-27.)<sup>22</sup>

Bancorp also attempts to entirely exempt its “system” claims from § 101, arguing that *Bilski*, *Benson*, *Flook*, and *Diehr* only concerned “process” claims, and that Bancorp’s “system” claims are not processes. (Dkt. No. 382, at 19-21.) Essentially, Bancorp’s argument is that

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<sup>22</sup> Bancorp also argues that Sun Life’s proposed construction of “storing” precludes argument that the claims cover an abstract idea. However, Sun Life’s proposed construction of “storing” is that the information be recorded “in a nontransient manner,” which means the information can be written down on a piece of paper. When the process is done on a computer, Sun Life’s construction is merely intended to distinguish momentary storage, such as in the register of a processor, with non-transient storage that can later be retrieved. (Dkt. No. 338, at 40-41.) And, again, merely adding a computer to store information does not make an unpatentable abstract idea patentable.

because it characterizes its claims as a “machine,” the claims are exempt from even being analyzed under Section 101. This is wrong, for a number of reasons.

First, there is no such thing as a “system” claim. Section 101 provides:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 101. The statute thus lists four categories of patentable subject matter: process, machine, manufacture, or composition of matter. There is no “system” category.

Bancorp’s system claims are processes because they all require the performance of certain steps (i.e., acts) to administer a life insurance policy. *See, e.g., Benson*, 409 U.S. at 70 (stating that a process “is an act, or a series of acts”); *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1316 (Fed. Cir. 2005) (“A process is a series of acts.”); *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007) (same). Courts consistently interpret claims phrased as a “system” in which a series of steps are performed as process claims. *See, e.g., Every Penny Counts, Inc. v. Bank of America Corp.*, 2009 U.S. Dist. LEXIS 53626, \*6-7 (M.D. Fl. May 27, 2009); *Ex parte Atkin*, No. 2008-4352, 2009 WL 247868 (BPAI Jan. 30, 2009).<sup>23</sup>

Indeed, according to 35 U.S.C. § 100(b), “[t]he term a ‘process’ means process, art, or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.” 35 U.S.C. § 100(b). Here, at best, the computer or computers are the “machine,” and Bancorp’s claims attempt to describe a new use of the computer or computers to administer an insurance policy. Under any application of the express definition, therefore, Bancorp’s claims are “processes.”

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<sup>23</sup> *See also Ex parte Mitchell*, No. 2008-2012, 2009 WL 460662, \*6 (BPAI Fed. 23, 2009) (rejecting an argument that claiming a “machine” automatically meant the subject matter fell into that statutory class.).

Second, and more important, the rule that abstract ideas cannot be patented, and the holdings of *Bilski*, *Benson*, *Flook*, and *Diehr*, apply to all categories of subject matter, not just processes. *See Benson*, 409 U.S. 63, 67-68 (1972) (“We dealt there with a ‘product’ claim, while the present case deals with a ‘process’ claim. But we think the same principle applies.”) (quoting *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948)); *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1375 (Fed. Cir. 1998) (“The question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to—process, machine, manufacture, or composition of matter—but rather on the essential characteristics of the subject matter.”); *Nuijten*, 500 F.3d at 1354 (“*State Street* was advising ... not to be overly concerned with pigeonholing subject matter once the court assures itself that *some* category has been satisfied. If, for instance, a court determines that a claim encompasses either a process or machine but is unsure which category is appropriate, it need not resolve the ambiguity. The claim must be within at least one category, so the court can proceed to other aspects of the § 101 analysis.”) (citations omitted); *see also AT&T Corp. v. Excel Communs., Inc.*, 172 F.3d 1352, 1357 (Fed. Cir. 1999) (abrogated on other grounds by *Bilski*, 545 F.3d at 960 n.19) (“Whether stated implicitly or explicitly, we consider the scope of Section 101 to be the same regardless of the form—machine or process—in which a particular claim is drafted.”); *In re Alappat*, 33 F.3d 1526, 1542 (Fed. Cir. 1994) (“*Benson* . . . applies equally whether an invention is claimed as an apparatus or process, because the form of the claim is often an exercise in drafting”) (quoting *In re Johnson*, 589 F.2d 1070, 1077 (CCPA 1978)).

Bancorp fails to cite a single case holding otherwise. Instead, Bancorp argues that the language quoted above from *Benson* (“[w]e think the same principle applies”) means that

abstract ideas are patentable if the claim is written as a “system” claim, instead of a “product” or “process” claim. This is untrue. The Court is clearly indicating that an abstract idea is not patentable regardless of whether it is recited in a method claim or product claim.<sup>24</sup> Bancorp’s “system” claims must be one or the other.

Following the Supreme Court’s lead, numerous opinions from the courts and the BPAI reject attempts to avoid Section 101 by redrafting claims as a “system” in which the mental steps are simply being performed by coined words ending in “or” or “er.” (See Dkt. No. 364, at 19, citing cases.) Bancorp attempts to capitalize on the fact that *Bilski* was decided recently, dismissing these cases as “pre-*Bilski*.” This effort is to no avail.

First, not surprisingly, there are now post-*Bilski* cases that reach the same result. See, e.g., *Ex parte Dettinger*, No. 2009-6998, 2010 WL 3768179, \*2 (BPAI Sept. 27, 2010) (holding that a “data processing system” claim was invalid under Section 101: “[a] claim that recites no more than software, logic or a data structure (i.e., an abstraction) does not fall within any statutory category”); *Ex parte Burkhardt*, No. 2009-8220, 2010 WL 3738331, \*4-5 (BPAI Sept. 22, 2010) (finding that a claim for a “system” with instructions capable of conducting the same steps of the corresponding method claim were unpatentable as an abstract idea for the same reasons the method claims were unpatentable); *Ex parte Choo*, No. 2009-6352, 2010 WL 2985362, \*2-3 (BPAI July 28, 2010) (rejecting the argument that recitation in the preamble to a “system” made the claim a statutory machine under Section 101 ).

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<sup>24</sup> See also *Flook*, 437 U.S. at 590, 593 (stating that the determination of patentable subject matter does not “depend simply on the draftsman’s art” and that “[t]he concept of patentable subject matter under § 101 is not ‘like a nose of wax which may be turned and twisted in any direction’”) (quoting *White v. Dunbar*, 119 U.S. 47, 51 (1886)).



Second, the pre-*Bilski* cases were applying the rule that abstract ideas cannot be patented and that merely adding some computer structure was an inconsequential field of use restriction. *See, e.g., Every Penny Counts, Inc.*, 2009 U.S. Dist. LEXIS 53626, \*6-7 (applying and citing *Benson* in stating that “[s]imply because the process at issue requires machines or computers to work, however, does not mean that the process or system is a machine”); *Ex parte Greene*, No. 2008- 4073, 2009 WL 1134839 (BPAI Apr. 24, 2009) (applying *Benson* in determining that recitation of a “computer system” did not impose any meaningful limits on the claim scope).<sup>25</sup> Nothing about *Bilski* changes that analysis.

Bancorp also argues that in many (but not all) of the cases cited by Sun Life, the elements of the claims were not necessarily concrete. This is not a meaningful distinction, however, because the elements in Bancorp’s claims are also not concrete, even under Bancorp’s proposed constructions. By adding that the steps are performed using “one or more computers,” the claims do not become concrete. Additionally, Bancorp misinterprets these cases, which found that the system claims include concrete elements and/or software, similar to Bancorp’s claims, but were nonetheless unpatentable. *See, e.g., Every Penny Counts, Inc.*, 2009 U.S. Dist. LEXIS 53626, at \*7 (finding that the claims included “machines for data input and data output and to perform the required calculations,” but that the claims were still unpatentable because the machines imposed no meaningful limits on the claim’s scope); *Research Corp. Tech., Inc. v. Microsoft Corp.*, 2009 U.S. Dist. LEXIS 71883, \*17 (D. Ariz. July 28, 2009) (finding that the term “comparator” could

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<sup>25</sup> *See also Mitchell*, 2009 WL 460662, at \*5-6 (“Similar to a field-of-use limitation in a process claim, the use of a general ‘processor’ and ‘memory’ is insufficient to render an otherwise ineligible claim patent eligible.”); *Ex parte Avinash*, No. 2009-1542, 2009 WL 1714570, \*9 (BPAI June 2, 2009) (applying *Benson* in determining that “image processing system” claim was unpatentable ); *Ex parte Holtz*, No. 2008-004440, 2009 WL 2586625, \*7 (BPAI Aug. 24, 2009); *Ex parte Koo*, No. 2008-1344, 2008 WL 5054161, \*8 (BPAI Nov. 26, 2008)

be a device or software, but that the claim was still unpatentable); *Koo*, 2008 WL 5054161, at \*8 (finding that the claims were unpatentable even though the elements of the claims could be implemented in software); *Greene*, 2009 WL 1134839, at \*7 (“[W]e find the nominal recitation of conventional computer components in an apparatus claim otherwise directed to a pure mathematical algorithm ... does not impose any meaningful limits on the scope of the claim”); *Mitchell*, 2009 WL 460662, at \*6 (explaining that “the use of a general ‘processor’ and ‘memory’ was insufficient to render an otherwise ineligible claim patent eligible”).

## **VI. The Machine-or-Transformation Test Should Still Be Applied, and the Claims Remain Unpatentable Under This Test**

As noted, Bancorp’s argument that the machine-or-transformation test was “rejected” is simply wrong; the Supreme Court was clear that “the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under §101.” *Bilski*, 130 S. Ct. at 3227. The claims being asserted in this case cannot pass this test.<sup>26</sup>

### **A. The Claims of the Patents-in-Suit Fail the Machine Prong**

As explained in the opening memorandum, whether drafted as “method,” “system,” or “computer” claims, all of the asserted claims fail the “machine” prong of the machine-or-transformation test.

#### **1. The “Method” Claims**

Bancorp does not even argue that the “method” claims satisfy the machine prong.

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<sup>26</sup> Bancorp also weakly argues that its “system,” “computer system” and “computer readable media” claims are not subject to the machine-or-transformation test because they are not process claims. As discussed above, however, these claims are process claims, and even if they are not, the machine-or-transformation test still applies. (See Section V, *supra*; see also Dkt. No. 364, at 11-12.)

## 2. The “System” Claims

The “system” claims are simply an improper attempt to circumvent § 101 through clever claim drafting. (*See* Dkt. No. 364, at 18-27 & 28.) Each of the terms in the system claims (“policy generator,” “fee calculator,” etc.) encompasses any and all ways of performing the recited function that follows the term. This includes anything, including a mental process or software. (*See id.*, at 18-20, 28.) Numerous opinions applying the machine-or-transformation test have found that there is no machine when mental steps are simply redrafted as a “system” claim. (*See id.*) Certainly, an unspecified “system” is not a “particular machine.” None of the authorities cited by Bancorp are applicable because they do not concern “system” claims, but instead add specific components of computer hardware, such as “a microprocessor” or “a processor.” (Dkt. No. 382, at 32-33.)

If inclusion of a “shift register” did not sufficiently tie the claims of *Benson* to a *particular* machine to render them patentable, then a generic reference to an unspecified “system” certainly cannot tie an unpatentable algorithm to a *particular* machine.

## 3. The “Computer” Claims

The next set of claims are the “computer” claims. As explained above and in the opening brief,<sup>27</sup> the nominal references to a general purpose computer do not transform the unpatentable algorithm into a patentable process because: (1) the recitation of a computer is merely a field-of-use restriction that would preempt the mental process; (2) the recitation of a computer is merely insignificant extra-solution activity; and (3) the “computer” is at best a general purpose computer, not a “particular machine.”

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<sup>27</sup> Section III, *supra*; *see also* Dkt. No. 364, at 21-27.

While Bancorp cites two pre-*Bilski* BPAI cases (conveniently ignoring the fact that it tries to dismiss all of *Sun Life*'s case law as "pre-*Bilski*"), the vast majority of cases from the BPAI and the district courts have concluded that nominal recitations to a general purpose computer, like those in Bancorp's claims, constitute a mere field-of-use restriction that would preempt the abstract idea or are merely insignificant extra-solution activity. (*See* Dkt. No. 364, at 22-24 & 25-26, citing numerous cases).

The two opinions cited by Bancorp fail to appreciate that the claim in *Benson* itself included underlying computer structure—a "shift register"—but was an unpatentable algorithm nonetheless. *Benson*, 409 U.S. at 73-74 (Appendix). The cases cited by Bancorp are also distinguishable. In the pre-*Bilski* case *Ex parte Moyer*, for example, the BPAI concluded that the process did not contain a mathematical formula or algorithm. *Ex parte Moyer*, No. 2009-2154, 2010 WL 227951, \*5 (BPAI Jan. 20, 2010). In the pre-*Bilski* case *Ex parte Messerges*, the BPAI did not even address whether the recitations would preempt an abstract idea or were insignificant extra-solution activity. *Ex parte Messerges*, No. 2009-5305, 2010 WL 1188128, \*7 (BPAI Mar. 25, 2010).

The recitations of computers in some of the asserted claims are insufficient to satisfy the machine prong of the machine-or-transformation test. Again, if the "shift register" in *Benson* was insufficient to tie the claims to a *particular* machine, Bancorp's generic "computer" must also be insufficient.

#### **B. The Claims of the Patents-in-Suit Fail the Transformation Prong**

The claims of the patents-in-suit also do not transform any article into a different into a different state or thing. They merely gather and manipulate data.

Bancorp does not disagree that this is all the claims do, but argues that gathering and manipulating data is sufficient to satisfy the transformation prong. This is clearly incorrect, as

the claims in *Bilski*, including claim 4, gathered and manipulated data and were still held unpatentable. *Bilski*, 130 S. Ct. at 3231. *See also In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008) (citing *In re Grams*, 888 F.2d 835, 840 (Fed. Cir. 1989), *In re Meyer*, 688 F.2d 789 (CCPA 1982), and *In re Schrader*, 22 F.3d 290, 293-94 (Fed. Cir. 1994)).

In support of this argument, Bancorp relies on the *Bilski* Federal Circuit's discussion of *In re Abele*. But as the Federal Circuit noted in *Bilski*, one claim in *In re Abele* met the transformation prong because the data represented physical and tangible objects, including the structure of bones and organs, and the data was transformed into an improved visual depiction of the bones and organs. *In re Bilski*, 545 F.3d at 962-63. In contrast, the data that is gathered and manipulated in the claims of Bancorp's patents do not represent any physical or tangible objects and is never transformed into any visual depiction of a physical or tangible object.

The *Abstrax* case is also completely different from Bancorp's claims. In *Abstrax*, the claim was to a method "for assembling a product having components" and the configuration model data, which "concern[ed] how parts, pieces, or components of a product fit together and how they are configured," was found to "represent[] physical and tangible objects and their respective structures." *Abstrax, Inc. v. Dell, Inc.*, 2009 WL 3255085, \*2-3 (E.D. Tex. Oct. 7, 2009). Again, in contrast, the data gathered and manipulated in the patents-in-suit does not represent any physical or tangible objects.

The claims of the patents-in-suit merely gather and manipulate data. This data does not represent any physical or tangible object and the data is not transformed into any visual depiction of a physical or tangible object. Consequently, the claims fail the transformation prong of the machine-or-transformation test.

## CONCLUSION

For the foregoing reasons, Sun Life respectfully requests that the Court find that all of the asserted claims of the patents-in-suit are not patent-eligible under 35 U.S.C. § 101 and grant summary judgment that all of the claims of the '792 and '037 patents are invalid.

Dated: October 6, 2010

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that on October 6, 2010, Sun Life's Reply Brief in Support of Motion for Summary Judgment of Invalidity under 35 U.S.C. § 101 was filed electronically with the Clerk of the Court to be served by operation of the Court's electronic filing system upon the following:

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